

CLAIMS

1. An information recording medium comprising:

a data area for recording therein record data;

5 a plurality of temporary defect management areas for temporarily recording therein defect management information which is a basis of defect management for a defect in said data area; and

a flag area for recording therein distinction information for distinguishing a temporary defect management area in which the defect management information that is effective is recorded, from
10 said plurality of temporary defect management areas,

the distinction information being recorded as a type of a combination pattern of an area set to be in a recorded condition and an area left to be in an unrecorded condition according to a
15 predetermined rule, in said flag area.

2. The information recording medium according to claim 1, wherein if said information recording medium comprises "n" temporary defect management areas (n : integral number, $n \geq 2$), said
20 flag area includes "n-1" flag unit areas.

3. The information recording medium according to claim 2, wherein the distinction information is indicated as an entire flag area by that each of the "n-1" flag unit areas is in the recorded
25 condition or in the unrecorded condition.

4. The information recording medium according to claim 3, wherein backup data corresponding to the record data is recorded into at least one flag unit area in the recorded condition out of the "n-1" flag unit areas.

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5. The information recording medium according to claim 2, wherein each of the "n-1" flag unit areas corresponds to the smallest recording area of said information recording medium.

10 6. The information recording medium according to claim 1, wherein said flag area is disposed on an inner circumferential side of said information recording medium.

7. The information recording medium according to claim 1,
15 further comprising a control information recording area for recording therein information for controlling at least one of recording and reading with respect to said data area,

said flag area being disposed in said control information recording area.

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8. The information recording medium according to claim 1, wherein said flag area is disposed in one temporary defect management area out of said plurality of temporary defect management areas.

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9. The information recording medium according to claim 8,

wherein said flag area is disposed at an end portion of the one temporary defect management area.

10. A recording apparatus for recording record data onto an
5 information recording medium comprising: (i) a data area for
recording therein the record data; (ii) a plurality of temporary defect
management areas for temporarily recording therein defect
management information which is a basis of defect management for a
defect in said data area; and (iii) a flag area for recording therein
10 distinction information for distinguishing a temporary defect
management area in which the defect management information that
is effective is recorded, from said plurality of temporary defect
management areas, the distinction information being recorded as a
type of a combination pattern of an area set to be in a recorded
15 condition and an area left to be in an unrecorded condition according
to a predetermined rule, in said flag area,

said recording apparatus comprising:

a first recording device for recording at least one of the record
data and the defect management information; and

20 a second recording device for updating and recording the
distinction information, if the temporary defect management area in
which the effective defect management information is recorded is
changed, by changing the area left to be in the unrecorded condition
to the area in the recorded condition according to the changed
25 temporary defect management area and thus by changing the
combination pattern.

11. A recording method of recording record data onto an information recording medium comprising: (i) a data area for recording therein the record data; (ii) a plurality of temporary defect management areas for temporarily recording therein defect management information which is a basis of defect management for a defect in said data area; and (iii) a flag area for recording therein distinction information for distinguishing a temporary defect management area in which the defect management information that is effective is recorded, from said plurality of temporary defect management areas, the distinction information being recorded as a type of a combination pattern of an area set to be in a recorded condition and an area left to be in an unrecorded condition according to a predetermined rule, in said flag area,

said recording method comprising:
a first recording process of recording at least one of the record data and the defect management information; and
a second recording process of updating and recording the distinction information, if the temporary defect management area in which the effective defect management information is recorded is changed, by changing the area left to be in the unrecorded condition to the area in the recorded condition according to the changed temporary defect management area and thus by changing the combination pattern.

12. A reproducing apparatus for reproducing record data recorded

on an information recording medium comprising: (i) a data area for recording therein the record data; (ii) a plurality of temporary defect management areas for temporarily recording therein defect management information which is a basis of defect management for a defect in said data area; and (iii) a flag area for recording therein distinction information for distinguishing a temporary defect management area in which the defect management information that is effective is recorded, from said plurality of temporary defect management areas, the distinction information being recorded as a type of a combination pattern of an area set to be in a recorded condition and an area left to be in an unrecorded condition according to a predetermined rule, in said flag area,

said reproducing apparatus comprising:

a selecting device for reading the distinction information and selecting the temporary defect management area in which the effective defect management information is recorded from said plurality of temporary defect management areas;

a reading device for reading the effective defect management information from the selected temporary defect management area; and

a reproducing device for reproducing the record data recorded in said data area on the basis of the read defect management information.

13. The reproducing apparatus according to claim 12, wherein said flag area has a plurality of flag unit areas and each of the

plurality of flag unit areas is in the recorded condition or in the unrecorded condition, and

said selecting device selects the temporary defect management area in which the effective defect management information is recorded by judging in which condition of the recorded condition and the unrecorded condition at least one of said plurality of flag unit areas is.

14. A reproducing method of reproducing record data recorded on an information recording medium comprising: (i) a data area for recording therein the record data; (ii) a plurality of temporary defect management areas for temporarily recording therein defect management information which is a basis of defect management for a defect in said data area; and (iii) a flag area for recording therein distinction information for distinguishing a temporary defect management area in which the defect management information that is effective is recorded, from said plurality of temporary defect management areas, the distinction information being recorded as a type of a combination pattern of an area set to be in a recorded condition and an area left to be in an unrecorded condition according to a predetermined rule, in said flag area,

said reproducing method comprising:

a selecting process of reading the distinction information and selecting the temporary defect management area in which the effective defect management information is recorded from said plurality of temporary defect management areas;

a reading process of reading the effective defect management information from the selected temporary defect management area; and

a reproducing process of reproducing the record data recorded
5 in said data area on the basis of the read defect management information.

15. A computer program for record control to control a computer provided for the information recording apparatus according to claim
10 10, said computer program making the computer function as at least one of the first recording device and the second recording device.

16. A computer program for reproduction control to control a computer provided for the information reproducing apparatus
15 according to claim 12, said computer program making the computer function as at least one of the selecting device, the reading device, and the reproducing device.

17. A data structure comprising:
20 a data area for recording therein record data;
a plurality of temporary defect management areas for temporarily recording therein defect management information which is a basis of defect management for a defect in said data area; and
a flag area for recording therein distinction information for
25 distinguishing a temporary defect management area in which the defect management information that is effective is recorded, from

said plurality of temporary defect management areas,

the distinction information being recorded as a type of a combination pattern of an area set to be in a recorded condition and an area left to be in an unrecorded condition, in said flag area
5 according to a predetermined rule.